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Learning Financial Literacy in the Family

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ABSTRACT

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This thesis examines the relationship between parental involvement and student level of financial literacy. Past studies have established that children's financial behavior and attitudes are shaped by their parents who pass on norms and social values to them. Using a convenience sample of 108 undergraduate students at a local state university, the present research tested whether children who had higher levels of financial literacy had parents who had taught them financial knowledge. The results of the test show that students' level of financial literacy is not significantly related to parental involvement.

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Chapter I

Introduction

In recent years, Americans' financial illiteracy has become one of the most talked issues in the United States. Many young adults in the United States lack financial literacy, defined as financial knowledge that allows individuals to make educated financial decisions including the ability to distinguish financial choices, discuss money, understand financial issues, and plan for the future (Valentine & Khayum, 2005; Johnson & Sherraden, 2007).

According to past research, only 25% of Americans live within their financial means (Clarke, Heaton, Israelsen & Eggett, 2005). In addition, research shows that there is a personal saving deficiency in this country as most Americans disproportionally borrow more money than what they save (Vyce, 2008). Overall, the numbers indicate that Americans' personal savings rate is at its lowest point since the Great Depression, and in 2006 the United States went into an overall "negative saving" rate (Sullivan et. al, 2000; Vyce, 2008).

While Americans' personal savings rate is at alarming low point, Americans' credit card balances are increasing significantly. According to the Federal Reserve, in 2006, America's total credit card debt was over $900 billion (Vyce, 2008). College students who usually have little knowledge about how to make wise consumption decisions are particularly at risk of becoming the target of credit card companies and other retailers (Johnson & Sherraden, 2007).

In fact, research shows that between 70% and 80% of all college students in the United States have at least one credit card today (Pinto, Parente & Mansfield, 2005), which translates to a spending power of $172 billion a year (Johnson & Sherraden, 2007). Considering that the average student graduates from high school without learning the fundamental skills to manage personal financial affairs, financial literacy is an important topic that needs to be addressed earlier in life (Avard, Manton, English & Walker, 2005). Living in a society that equates personal accomplishments with material success and that emphasizes instant material gratification over safe spending makes the issue of financial literacy even more relevant.

Consistent with the social learning approach which states that children's behavior and attitudes are shaped by parents who transmit norms and social values to their kids, previous research found that children learn consumer behavior from their parents who are the most important agent of socialization (Pinto et al., 2005; Liao & Cai, 1995). Following past studies, this study hypothesized that parental involvement, defined as parents' support and commitment to pass financial knowledge to their children, results in an increase of children's levels of financial literacy, controlling for race, sex, age, family income, and employment status.

Chapter II

Literature Review

Financial Literacy among High School and College Students

Research shows that while most students are unable to balance a checkbook and do not know the fundamental principles of earning, spending, saving and investing (Avard, Manton, English & Walker, 2005), about 80% of teens from the ages of 18 to 20 have credit cards today (Clarke, Heaton, Israelsen & Eggett, 2005). Overall, the average student graduates from high school lacking basic financial skills. Most high school graduates are not prepared to discuss financial matters including money, financial choices, or even plan for the future (Johnson & Sherraden, 2007). This lack of financial literacy prevents people from making educated financial decisions and represents an important social problem that needs to be studied.

A study of personal financial literacy, conducted with a sample of high school seniors in urban and rural high schools in Southwestern Indiana, concluded that there is a financial literacy deficiency among high school students (Valentine & Khayum, 2005). In order to measure the students' level of financial literacy, the researchers administered a personal financial literacy quiz that covered questions on credit cards, checking and savings accounts, automobile insurance, housing rental, food and car purchases. Valentine and Khayum (2005) found that of the entire sample of 312 students, the majority of students merely answered 51 percent of the questions correctly, demonstrating a lack of financial literacy.

Another survey conducted on 1500 high school seniors presented similar results. Overall, students answered correctly only 57.3 % of 31 items measuring financial knowledge such as money management, income, credit, and saving and spending (Palmer, Pinto & Parente, 2001). Furthermore, only 10.2 % of the students got a C or better grade indicating a low degree of financial literacy among the youth. Even though the lack of financial knowledge among high school students is a source of major concern, not all states have taken measures to promote financial education.

College students also show a lack of knowledge about everyday financial matters. On average, freshman students scored 34.8 % on the financial literacy test and nearly 92 % of the students failed the test with a score of 60 percent (Avard et al., 2005). In a related study where college students were asked questions about their personal finances, the participants were only able to answer 53% of the questions correctly (Joo, Grable & Bagwell, 2003).

Even though 70% of all undergraduates at four year colleges have at least one credit card today, 68% of college students rarely budget or have a spending plan balancing their income and their monthly expenses (Joo et al., 2003; Murphy, 2005). In addition, only half of the students paid their credit card bills in full each month and 40% did not know the annual percentage rate of their credit cards (Murphy, 2005). On a similar note, many young individuals do not consider having a savings account or saving a relevant matter. Johnson (2007) reported that whereas fewer than half of 16 to 22 year old students said that they always saved some money, only half of the students considered that saving was very important.

In 2008, Jump$tart, a non-profit organization, conducted a national survey designed to measure the financial literacy of high school seniors and college students (Mandell, 2009). The results of one of the surveys indicated that high school students' score of 48.3 percent was the lowest level ever of financial literacy. On the other hand, college students scored on average 62.2 percent on the same 31 question exam, 29 percent better than the high school students (Mandell, 2009).

While it is encouraging to see that for every year of college, the level of financial literacy of college students increases (senior students scored 64.8 percent higher), the fact that only 25 percent of young adults are graduating from college gives us reason to be concerned about the financial future of young American adults (Mandell, 2009). Given that, it is estimated that about 75 percent of young American adults will probability lack the skills to make informative and beneficial financial decisions

According to one study, most students graduate from college with nearly $20,000 in total debt, a combination of student loans and other debts (Palmer et al., 2001). Student debt is not a topic to be taken lightly as a student's high level of debt might contribute to the denial of future credit for automobile, home and other related credit purchases. In addition, college students are often at risk of increasing their debts significantly as many college students used part of their student loans to make payments on their credit cards. Although, credit card debtors can file for bankruptcy, student loans are not dischargeable under the federal bankruptcy law, constituting a major concern as debts loads are often significantly greater than starting salaries (Palmer et al., 2001).

The Financial Literacy of Adults in the United States

Adults in the U.S. are also financial illiterate. A study conducted for the National Council on Economic Education showed that despite believing that having a good understanding of economics is important, on average, high school students and working-age adults failed to understand basic economics (Lusardi & Mitchell, 2007). Overall, adults scored a grade of C in the 24-item questionnaire which covered topics grouped into categories including "Economics and the Consumer," "Money, Interest Rates and Inflation," and "Personal Finance." High school students scored even lower in the survey with most earning a F (average score of 53 percent). The financial topics that respondents had a harder time answering were related to interest rates, inflation, government and trade, and personal finance. In addition, the study highlighted gender and minority gaps. Specifically, the report found out that white students and adults tended to score higher than their black and Hispanic peers, and women scored lower than men (Lusardi & Mitchell, 2007).

Another study exploring the financial literacy of adults in the U.S. was conducted by Hilgert and Hogarth (2002) using data from the University of Michigan's 2001 Survey of Consumers (Lusardi & Mitchell, 2007). The sample of the study included about 1,000 respondents age 18-97. The 28-question True/False Financial Literacy quiz included questions covering financial topics such as knowledge about credit, saving patterns, mortgages, and general financial management. The study showed that, in general, less financially knowledgeable respondents were more likely to be single, relatively uneducated, relatively low income, minority, and either young or old (not middle aged).

One report that covered middle age respondents (over the age of 50) was the 2004 Health and Retirement Study (Lusardi & Mitchell, 2007). In this case, the study examined how workers made saving decisions, how they collected the information for making these decisions, and, most importantly, whether they possessed the financial literacy needed to make informed decisions. Overall, the research concluded that only half of the HRS respondents surveyed could answer two simple questions regarding interest compounding and inflation correctly. While over 80 percent got the Percentage Calculation question correct, only about half could divide $2 million by 5 to get the Lottery Division right.

More worrisome is the fact that only 18 percent were able to correctly compute the compound interest question; of those who got that interest question wrong, 43 percent undertook a simple interest calculation, thereby ignoring the interest accruing on both principal and interest (Lusardi & Mitchell, 2007). Those findings are especially alarming considering that the majority of the respondents in the sample are only a dozen years from retirement and should already have the financial experience that comes from handling numerous financial decisions during their lives.

Parental Involvement Influencing Children's Financial Literacy

The literature on financial literacy suggests that parents play a significant role in influencing children's consumer behavior (Pinto et al., 2005; Lucey & Giannangelo, 2006; Clarke et al., 2005; Palmer et al., 2001). According to Pinto et al. (2005) while 75% of American children learn the most about how to manage money from their

parents, 87% of college students and 90% of high school students rely on their parents for financial advice (Pinto et al., 2005). Two additional surveys conducted by the Jump$tart Coalition and the American Savings Education Council concluded that nearly all the teenagers learned most about money management from their parents (Lucey & Giannangelo, 2006).

A theoretical model that explains how children acquire and develop consumer behavior from their parents is the social learning perspective. According to Bandura's social learning theory, parents in particular, socialize children by passing on social values and by controlling behavior through reinforcement, rewards or punishments (Liao & Cai, 1995). The key principle of this theory is that children learn behavior and develop attitudes through the reinforcement of parents. In regards to consumer behavior, parents also influence children by interacting with them in the marketplace, and by educating them about consumption related activities, all behaviors that children learn and model as they grow older (Pinto et al, 2005).

One study found that students, whose parents used credit cards regularly, had a positive attitude toward credit compared to students whose parents used credit cards less. Furthermore, students whose parents had credit-related problems were more likely to have negative attitudes toward credit compared to others (Joo et al, 2003).

This finding demonstrates that one's attitude toward credit is strongly dependent upon socialization. Therefore, students whose parents showed positive credit behaviors are more likely to hold positive attitudes toward credit than students whose parents had

credit-related problems. Hence, exposure to credit usage, either positive or negative, seems to be highly related to an individual' attitude towards credit.

In addition, researchers reported that adolescents whose parents stressed saving, budgeting, and other money management strategies were less likely to engage in gambling. On the other hand, adolescents who gambled tend to have parents who were gamblers (Delfabbro & Thrupp, 2003). From the social learning perspective, these children learn values such as gambling or money management from watching their parents, who play a critical role in transmitting such beliefs.

According to Liao and Cai (1995), the family is the most important agent of socialization because individuals are strongly conditioned by their childhood social learning experiences. Therefore, the self-concept formed in childhood tends to play a role in future behavior, and whatever children learn early in life often carries into adulthood.

Brand and product preferences are another example of this principle. Palmer et al. (2001) emphasizes the concept of brand loyalty, which refers to parents passing their preferences for specific products or brands to their children. Through childhood socialization, these children learn consumer patterns from their parents who enforce modeling and mediation as learning mechanisms to teach consumer skills to their children (Palmer et al., 2001). Consequently, as children grow into young adults, they become consumers themselves of these specific products and brands.

Peers, schools, and the mass media also have a significant role in consumer socialization as they transmit norms, attitudes, motivations, and behaviors to the learner

(Moschis & Churchill, 1978; Clarke et al., 2005; Pinto et al., 2007). Pinto et al. (2007) found that older children tend to rely mostly on their peers and mass media for lifestyle issues and consumption information regarding music, movies, clothing, or brand choices, whereas parents had the most influence on future life goals and aspirations.

In the same way parents do, schools reinforce rules of acceptable behavior in the marketplace and contribute to the development of children as consumers. Unfortunately, in the last couple of years, the public education system has been affected by deep budget cuts, forcing many school boards to rely on corporations for financial help. As a result, many public schools have become the new advertising centers for corporations which in exchange for cash are allowed to display and promote many of their products on hallways, buses, school rooftops, book covers, and uniforms (Graaf et al., 2005).

The vast exposure to a variety of consumer products has, without a doubt, increased schools' influence on students' consumer behavior. As a final point, in the book *Affluenza*, it was reported that nearly in half a million classrooms, a total of 8.1 million children watch Channel One, a daily news program that children are compelled to watch (Graaf et al., 2005). Two minutes of the 12-minute daily news program are solely designated to commercials that are supported by advertisers who paid an estimated $200,000 for a single 30-second spot on Channel One (Graaf et al., 2005).

While the former ally mentioned socialization agents, peers, schools, and the mass media, play a significant role in shaping consumer behavior, it should be noted that parents influence children's financial literacy the most (Clarke et al., 2005). Clarke et al. (2005) found out that children who had higher levels of financial preparedness were those

whose parents had taught them financial literacy. More specifically, while fathers were often seen as the responsible people for financial management in the family, it was found that mothers were more involved in teaching children financial knowledge compared to fathers.

The fact that the majority of the students turned out to be financially literate as a result of their parents' involvement in teaching them financial skills is consistent with the basics of the social learning approach which views parents as the most important influence on consumer behavior (Lucey & Giannangelo, 2006; Pinto et al., 2005). Bearing in mind that women are often the primarly responsible people for child care, it is also more likely that mothers would spend more time teaching their children financial skills on a daily basis compared to fathers (Kenney, 2008). Nevertheless, the results of this study could not be generalized to the rest of the population due to the homogeneity of the sample. In this specific case, the respondents of the sample were disproportionately white Caucasians (93%) from upper-middle class families and who came from two-parent homes.

Race/Ethnicity, Social Class and Financial Literacy

Researchers have established a link between race/ethnicity and financial literacy (Chen & Volpe, 1998; Murphy, 2005) as well as family income and children's levels of financial literacy (Johnson & Sherraden, 2007; Financial literacy and Ignorance, 2010). For instance, Lucey and Giannangelo (2006) show concern for the discrepancies in children' level of financial literacy as minority children show much lower levels of

financial knowledge compared to their white peers. Among college students, race also appears to play a role in students' levels of financial knowledge. Minority students tend to score lower in financial literacy knowledge and practices compared to whites (Chen & Volpe, 1998; Murphy, 2005).

On a test of financial knowledge, white students scored significantly higher (55 %) compared to Hispanics (46.8 %) and African Americans (44.7 %) (Johnson & Sherraden, 2007). Also, among college students, African American and Hispanic females are most financially at risk for credit card debt (Johnson & Sherraden, 2007). In a survey that measured level of financial literacy among college students, Chen and Volpe (1998) also found that African Americas scored the lowest scores in all areas of financial knowledge compared to other groups such as whites, Asians, Hispanics and foreign students.

Murphy (2005) tested whether blacks would score lower than whites in predominantly black universities since the majority of studies that examine financial knowledge among college students tend to take place in mostly white universities where minorities are usually underrepresented (Chen & Volpe, 1998; Joo et al., 2003). According to this research, even in universities where blacks are the majority, they score lower than whites.

As race/ethnicity has been shown to be a determinant of level of financial literacy, the literature indicates that financial literacy can also be affected by an individual's socio-economic status (Johnson and Sherraden, 2007; Zhan, Anderson & Scott, 2006; Lyons and Scherpf, 2005). In a study on financial knowledge, students from the highest income

families (over $80,000 per year) scored significantly higher than students from low income families (Johnson and Sherraden, 2007). Similarly, data from the most recent wave of the National Longitudinal Survey of Youth showed that the more financially literate adults (23–28 years old) had parents who had stocks and retirement savings when these young adults were teenagers (Financial literacy and Ignorance, 2010).

Many low income families are prone to have low credit scores which can result from making late payments or not being able to pay at all. Having low credit scores becomes an additional barrier for low income individuals since they are often eligible for high interest loans and credit cards (Johnson & Sherraden, 2007). These economic disadvantages put them at risk of being victims of abusive lending practices (Zhan, Anderson & Scott, 2006; Murphy, 2005).

While many employees increase their financial awareness through employer-based programs on financial education and retirement savings, low income individuals are less likely to work for employers who offer workshops on financial education or retirement benefits (Zhan et. al, 2006). Unfortunately, low income individuals are more likely to drop out of high school which in the long run contributes to their financial illiteracy since they have less access to school based education programs.

Lucey and Giannangelo (2006) also claim that the ownership of home computers increases financial knowledge as individuals are able to control financial accounts more efficiently. On the other hand, as we become a society that depends more and more on technology, those individuals who are not able to afford technology or have the skills to operate in a technological age are at a financial disadvantage. This is the case of

underrepresented groups whereas larger percentages of African Americans and Hispanics do not use a computer compared to whites (Lucey and Giannangelo, 2006). When controlling for education, it was found that whites of all education levels were more likely to own home computers compared to African Americans.

Lyons and Scherpf (2005) stated that some of reasons minority groups such as immigrants remain unbanked and consequently financially illiterate is due to financial constraints (e.g., do not have enough money, poor credit history), the costs associated with an account are too high (e.g., high minimum balances, high fees and service charges), and limited access and availability to financial institutions (e.g., hours or locations are inconvenient).

By contrast, Rhine and Toussaint-Comeau (2000) argue that consumers who are immigrants or members of a minority group have a greater reluctance to use formal financial institutions because of negative historical experiences and/or perceptions. In the case of immigrants, these apprehensive attitudes towards banks might be shaped by negative experiences in their native country. As a result, immigrants and minorities are more likely to rely on family and friends to meet their financing needs (Lyons and Scherpf, 2005). In either case, the high proportion of low income consumers who are not able to make informed financial decisions is alarming.

Gender Differences in Financial Literacy

Women and men show differences in their level of financial literacy. Past research shows that male students are more likely to be in debt than female students since

more men than women take up credit (Davies & Lea, 1995; Kirchler, Hoelzl & Kamleitner, 2008). Chen and Volpe (1998) showed than men tend to know more about insurance and personal loans compared to women who usually are more knowledgeable in financial areas such as spending and saving, taxes and personal financial planning.

While men tend to feel more confident of their money handling abilities which leads them to take higher financial risks, women have more negative and conflicting feeling about money, as their financial attitudes tend to be more conservative (Edwards, Allen & Hayhoe, 2007 ; Kirchler et al, 2008) . This cautious approach towards money management might explain why undergraduate debt discourages women more than men from entering graduate training (Davies & Lea, 1995).

Consistent with previous research, college-aged women repeatedly show lower levels of financial literacy compared to college-aged males (Chen and Volpe, 1998; Murphy, 2005). Sex differences in college students can be the result of socialization, as children learn gender roles from observing their parents. One study concluded that parents hold different expectations for daughters and sons. Parents have higher expectations for working and saving for sons, and because of this, they are more likely to talk with their sons about money (Edwards et al., 2007). In contrast, Edwards et al. (2007) noted that parents socialize daughters to be more financial dependent since they receive more financial support from their parents than college age sons. However, even after controlling for financial dependence, daughters were more open with the parents about their spending habits compared to sons.

Overall, it appears that one significant difference between males and females is that males tend to view money as power and believe that having money will make them more socially desirable, whereas women seem to have a more security conscious approach towards money.

The Effects of Financial Illiteracy's on People's Lives

Learning financial skills earlier in life can have tremendous benefits in the long run. Individuals who are financially literate are better able to cope with the financial difficulties they may encounter during their lives. However, when one lacks financial management skills even small financial problems can become overwhelming. These overwhelming feelings which often turn into financial stress are likely to affect other aspects of their lives such as their personal relationships or their performance at work.

While the dissolution of a marriage is often the product of a combination of factors, the literature indicates that financial problems and arguments about money are precipitating factors in 90 percent of all divorce cases (Graaf et al., 2005). This is a serious issue considering that about one third to one half of all first marriages end in divorce (Grable, Britt & Cantrell, 2007). Research shows that there is a strong association between conflicts about money and marital satisfaction (Dew, 2008; Dean et al., 2007; Grable et al., 2007). In this case, Grable et al. (2007) suggests that individuals who are prone to bouncing checks, making late credit card payments, and overspending income, tend to experience low financial satisfaction, a strong predictor of marital distress.

In a 12-year longitudinal study that looked at variables that increased the probability of divorce, spending money foolishly was found to be one of the statistically significant predictors of divorce in addition to infidelity, drinking or drug use, and "irritating habits" (Dean, Carroll & Yang, 2007). Consequently, spending money foolishly showed to be a strong predictor of divorce as it increased the likelihood of divorce by 45%.

Grable et al. (2007) also conducted a study to see which of the identified influencing factors to relationship satisfaction and the likelihood of divorce would have the highest effect on marital distress. The study concluded that out of all the variables included in the analysis (i.e., age, years married, number of children in the household, educational level, level of self-esteem, employment status, gender, race/ ethnic background and household income), financial stress was the most important predictor of marital distress. In other words, individuals who showed higher financial satisfaction had the lowest marital distress.

In general, when people lack financial knowledge, they are at risk of making bad financial decisions which in the long run can result in unmanaged debts that jeopardize the well-being of their relationships. According to Dew (2008), consumer debt represents a major threat for recently married couples' marital satisfaction. Consumer debt undermines marital satisfaction by decreasing spouses' time together due to the need to work additional hours to make end meets, increasing financial arguments and perceiving financial unfairness in money matters (Dew, 2008).

Dean et al. (2007) also established a link between marital quality and conflict around financial issues. According to their study, disagreements about money were strongly and positively correlated with overall relational dissatisfaction. In addition, when conflict about money was added to a regression equation predicting marital satisfaction, it was found that conflict about money improved the predicted variability by more than 40 percent (Dean et al., 2007).

In addition to predicting low marital satisfaction, research shows that financial stress which has been associated with poor financial management can have a negative impact on employees' productivity and overall job performance (Garman, Leech & Grable, 1996; Kim & Garman, 2003; Kim & Garman, 2004). According to Garman et al. (1996), poor financial behaviors such as underestimating expenses, overestimating income, not having a cash reserve for emergencies, buying products and services on credit or lack of planning increase people's levels of financial stress. Based on the literature, individuals with high levels of financial stress are more likely to miss work on a regular basis, have lower levels of pay satisfaction and spend work time handling financial matters (Kim & Garman, 2004).

In a survey conducted among corporate human resource executives, 32% of the executives claimed that the financial illiteracy of the workers was the most ignored issue in the workplace as it had a direct effect on employee productivity (Garman et al., 1996). Research has estimated that 15% to 20% of workers in the Unites States experience financial stress which affects their productivity (Garman et al., 1996; Kim & Garman, 2004).

On the other hand, Kim and Garman (2003) suggest that individuals with higher levels of financial well-being are less likely to miss work. These findings are not surprising as other studies have also supported the argument that poor financial management increases levels of financial stress which result in higher absenteeism at work (Garman et al., 1996; Kim & Garman, 2003; Kim & Garman, 2004). Even after controlling for, age, gender, household income, education, organizational commitment and health, the relation between financial stress and absenteeism was significant (Kim & Garman, 2003).

The link between financial stress and absenteeism can be better understood from a worker's overall health. Kim, Sorhaindo and Garman (2003) showed evidence that low levels of financial well-being have a negative impact on a person's health. As a result, individuals who suffer high levels of financial stress are more likely to miss work due to poor health. In sum, individuals who are more frequently absent from their work are those who are more financially stressed.

Additionally, the fact that financial stressed people tend to have poor money handling skills play a role in increasing their levels of stress as they easily become overwhelmed with bills and expenses. On the other hand, individuals with more financial literacy are less likely to become financial stressed since their financial knowledge allows them to control their expenses more wisely. Last, high levels of financial stress also represent a problem in the workplace in the form of low employee's productivity and job performance.

It is important to note that while there are many situations that can create serious financial problems such as changes in employment status, need to support parents or other persons, major unexpected bills or divorce, often, financial knowledge helps individuals to cope better with economic troubles. Financial understanding not only gives individuals the tools to plan for the future but most important, it gives people a greater sense of control over their finances which can make a difference between sinking into an economic crisis or making it through difficult times.

Legislation on Financial Literacy

The lack of financial literacy among Americans has also been addressed by government officials, who have started to recognize not only the importance of providing financial information to the general public but also the effectiveness of bringing financial literacy into the classroom. In 2008, President Bush created the first Advisory Council on Financial Literacy recommending Congress and state legislatures to include financial education in all schools for students in kindergarten through 12^{th} grade (Bernard, 2010). In addition to advising schools to include financial education in their curriculums, the Advisory Council on Financial Literacy, composed of various members representing different industries, aims to increase financial education in the workplace, increasing access to financial services and conducting research on financial knowledge (Unites States Department of the Treasury, 2009).

President Obama has also showed support for improving the financial knowledge of American citizens. In a recent press resealed which took place in April 2, 2010,

President Obama discussed his new Consumer Financial Protection Agency proposal to ensure that ordinary Americans get clear and concise financial information in order to prevent people from fraud and predatory banking practices. (Jump$tart Coalition, 2010). The new Consumer Financial Protection Agency follows the steps of the Credit Card Accountability Responsibility and Disclosure Act of 2009 which was first designed to end banks and credit card companies' deceptive tactics.

While there have been efforts to increase the level of financial capability among Americans, financial literacy programs still have a long way to go. According to Jump$tart Coalition, out of the fifty U.S. states, only three states such as Utah, Missouri and Tennessee, require at least one-semester course devoted to personal finance for high school graduation (Jump$tart Coalition, 2010). While eighteen states require personal finance instruction incorporated into other subject matter such as math or social studies, 29 states, including California, show no requirements for financial education, leaving in most cases, personal finance as an electively course.

Because in many states, financial education remains an elective course when state budgets are tight, these courses are more likely to be cut than added (Bernard, 2010). Also, in states where financial education is not required but encouraged, instruction might not be consistent across the state (Fiscal Focus, 2009). In Kansas, for instance, even though school districts had succeeded in integrating financial instruction into the curriculum for students of all ages, "only 17.7% of Kansas schools indicated their district required instruction in financial literacy and, of that percent, only 6.67% reported having a specific curriculum framework for teaching financial literacy" (Fiscal Focus, 2009: 1).

Finally, the lack of teacher training in the subject of financial literacy makes many teachers feel uncomfortable teaching financial principles.

A recent study found that 64 percent of kindergarten through 12th-grade teachers from states with financial education guidelines did not feel qualified to teach the personal finance curriculum (Bernard, 2010). Training teachers to become successful financial mentors in addition to requiring more states to mandate a course in personal finance are two key components of developing a generation that is more financially literate. The fact that 29 states in the U.S. do not require any type of financial education represents a major gap in the American educational system, especially when previous studies have confirmed that financial education at school contributes to more financial literate students (Bernard, 2010).

Past research indicated that college students who came from states where there was a personal finance course required made better financial decisions than students who lacked financial instruction at school (Bernard, 2010). In addition, that study found that financial literate students were more likely to budget, save and pay off their credit cards fully compared to other students. Also, financial educated students appeared to be more financial responsible as they were less likely to have maxed out their credit cards in the previous year (Bernard, 2010).

Summary

In summary, college students are entering a complex financial world without having the basic financial skills to manage their financial affairs (Avard et al., 2005). As a result of this lack of financial literacy, college students are vulnerable to experience economic hardships such as bankruptcy, debt and bad credit scores (Johnson & Sherraden, 2007).

Research shows that poor financial behavior has the ability to negatively impact other areas of a person's life such as one's job performance or personal relationships. Lack of financial illiteracy has been linked to low job performance and employee productivity (Garman et al., 1996; Kim & Garman, 2003; Kim & Garman, 2004). In addition, previous studies have pointed out those individuals who lack financial skills are more prone to experience final stress and low financial satisfaction which can lead to relational unhappiness and divorce (Graaf et al., 2005; Dean et al., 2007; Grable et al., 2007; Dew 2008).

The literature also indicates that individuals who lack financial skills are more prone to experience financial stress and low financial satisfaction which can lead to relational unhappiness and divorce (Graaf et al., 2005; Dean et al., 2007; Grable et al., 2007; Dew 2008). In addition, poor personal financial behavior has also been linked to low job performance and employee productivity, showing that the issue of financial knowledge has the ability to impact many areas of an individual's life (Garman et al., 1996; Kim & Garman, 2003; Kim & Garman, 2004). Overall, the financial illiteracy of young adults in the United States represents a major problem considering that the

financial decision they make early in life can affect their ability to become financially independent adults in their later years.

Previous studies show that men have higher levels of financial literacy than women (Murphy, 2005; Chen & Volpe, 1998). In general, men are more comfortable than women taking financial risks whereas women tend to be more budget conscious (Edwards et al., 2007; Kirchler et al., 2008). Research has also established a link between racial/ethnic background and level of financial knowledge. On average, minority college students tend to score lower in financial literacy knowledge and practices compared to whites (Chen & Volpe, 1998; Murphy, 2005). Social class has also been documented as a determinant of level of financial literacy. In fact, in a study on financial knowledge, students from the highest income families (over $80,000 per year) scored significantly higher than students from low income families (Johnson and Sherraden, 2007).

Extensive literature on the topic of financial literacy emphasizes that parents are the most important influence of consumer behavior (Pinto et al., 2005; Lucey & Giannangelo, 2006; Liao & Cai, 2005; Clarke et al., 2005). In fact, various studies have confirmed that almost all teenagers and college students learn most about money management from their parents (Pinto et al., 2005; Lucey & Giannangelo, 2006). According to the social learning approach, children' financial attitudes are shaped by the cultural values and norms that their parents pass on to them (Pinto et al, 2005; Joo et al., 2003). Based on this theoretical model, children learn financial behavior from their parents who are the most influential agent of consumer socialization (Liao & Cai, 1995).

Although research has documented that children with a higher level of financial literacy had parents, especially mothers, who had taught them financial skills, these finding were subjected to considerable limitations since the majority of the respondents in this study were white (93%) from upper-middle class families who came from two-parent homes (Clarke et al., 2005). In this case, research has failed to explore whether the same relationship between parental involvement and children's levels of financial literacy can be found in a more demographically diverse sample.

Hypothesis Section

In order to close the gap in the literature, the present study included a more demographically diverse sample to include the experiences of different racial/ethnic groups as well as to examine the impact that other demographic variables have on children's levels of financial literacy. This study examined the following hypothesis: parental involvement increases children's levels of financial literacy, controlling for race, sex, age, family income and employment status.

In this research, parental involvement, including mothers and fathers, was the independent variable while children levels of financial literacy was the dependent variable.

Chapter III

Methodology

Data Collection Procedures

Surveys were distributed to undergraduate students enrolled in four sociology classes offered at a local State University during the 2009 spring semester. The researcher recruited the subjects by asking each professor to allow his/her students to complete the questionnaire in their classroom. The sample size for this research included 108 undergraduate students, ranging from ages 18 to 45. The proposed research method was a convenience sampling. This specific university was chosen because it offers a demographically diverse sample of students: 52% are minority, 28% are white, 8% are foreign and the remaining 11% includes other (Office of Institutional Research, 2008). The diversity of the sample gave information about the experiences of students from diverse racial/ethnic backgrounds.

Consistent with ethical procedures, participation in this research was voluntary. Refusal to participate before or during data collection had no effect on grades or evaluation of student performance in class. Respondents were informed that participation was voluntary and that they could withdraw from the study at any time without consequences. In addition, even though the survey questions were not invasive or focused on sensitive issues, the participants were informed that they could skip any question or set of questions that made them feel uncomfortable.

Students did not receive any compensation for filling out their survey. However they did benefit by knowing that their input is valuable and will aid in social science

research studying the relationship between students' level of financial literacy and parental involvement. Participants experienced no perceived risk since the survey was completely anonymous and on a voluntary and confidential basis.

After obtaining approval from the Institutional Review Board, questionnaires were distributed to students who responded using a pencil/pen and paper. Participants were given fifteen minutes to complete the survey. The survey instrument focused mainly on determining how influential parents were in teaching their children money management skills and in assessing students' level of financial literacy in regards to automobile insurance, credit card usage and other financial tasks. The survey instrument consisted of questions for financial literacy derived from past research as well as those developed by the present researcher. For both sets of questions, a fixed response question format was used. The questionnaire and letter from the Institutional Review Board were attached in Appendices A and B.

Methods of Analyses

For this study, the method of analysis was quantitative. Statistical tests were conducted using SPSS/ PC. In order to test the hypothesis which states that parental involvement increases children's level of financial literacy, factor analysis and regression analysis were used. Other statistical techniques such as independent samples t-test and chi-square were also included in the study to provide further analysis.

Factor analysis is an exploratory analysis that is often used to simplify the data. That is, when a data analyst has a messy set of too many variables, he or she may run a

factor analysis to see if the variables can be reduced to a smaller set of variables (Warner, 2008:813). The matrix of loadings or correlations tells us how strongly linearly related each measured X variable is with each factor (Warner, 2008:758). The eigenvalue is a constant value that is associated with one of the factors in a factor analysis (Warner, 2008:1009).

The factor loading indicates the correlation between each variable and each factor (Warner, 2008:1019). A communality is an estimate of the proportion of variance in each of the variables that is reproduced by a set of factors. Communality is obtained for each variable by summing and squaring the correlations (or loadings) for that variable across all the retained factors (Warner, 2008:1000).

The main purpose of regression analysis is to make predictions and define the relationship between two or more variables. In other words, in a standard multiple regression model, the association of each independent variable with the dependent variable is assessed while statistically controlling for or partially out all the other predictor variables (Warner, 2008:1024).

B is the unit of measure, the unstandardized coefficient that describes the linear relationship between the dependent variable and the independent variable controlling for all other independent variables in the model. The unstandardized regression coefficient "b" is used to generate a predicted raw score on the dependent variable, financial literacy score, from a raw score on the independent variable. It corresponds to the predicted number of units of change in the dependent variable for each one-unit increase in the independent variable (Warner, 2008:996).

In multiple regression, each unstandardized coefficient has a corresponding standard error estimate which calculates approximately how much the value of b should vary across different samples drawn from the same population (Warner, 2008:1040). Beta, the standardized regression coefficient, indicates the strength of each of the independent variables compared to the other variables in the equation. In this case, the highest standardized coefficient in the regression equation will tell us which independent variable has the strongest effect on financial literacy score.

In regards to the *t* statistic, a large value of t is usually interpreted as evidence that the value of the sample statistic is one that would be unlikely to be observed if the null hypothesis were true (Warner, 2008:1044). Also, the adjusted R-Square value tells us how much of the variation in respondent's financial literacy score can be explained by the independent variables in the regression equation.

An independent samples t-test is a statistic that can be used to compare the mean scores of two groups on a given variable (Warner, 2008). This test allows one to test for differences between groups. The mean is a measure of central tendency, the average value that is obtained by summing the scores in a sample and dividing by the number of scores (Warmer, 2008: 1021). The standard deviation indicates how much observations deviate from the mean. The degrees of freedom (*df*) are the number of independent pieces of information on which a statistic is based (Warmer, 2008: 1006). The *p* value represents the theoretical probability of obtaining a research result equal to or greater than the one obtained in the study, when the null hypothesis is correct (Warmer, 2008: 1029).

The chi-square test is used to assess whether the independent variable and the dependent variable are significantly related. This is a test statistic that compares observed and expected values (often, cell frequencies) to see if they are discrepant; a large chi-square (X^2) indicates a poor level of agreement between observed and expected frequencies (Warmer, 2008: 1000).

Operationalization of Variables

Independent variable. In this study, parental involvement was the independent variable and it was conceptually defined as parents' commitment and active participation to pass financial knowledge to their children. The selection of the seven financial items included in the survey was taken from a previous study which examined how financial literacy was learned and transferred in a family setting (Clarke et al., 2005). In regards to the questionnaire, each question/statement was modified by the author to exclusively assess the level of parental involvement in teaching children's financial literacy. Therefore, parental involvement was measured operationally by asking the following two sets of questions:

(1) During your teen years, how frequently did your parents/step-parents talk to you about any of the following financial values: (a) spending habits and (b) saving money? Possible responses included, "never" (coded 0), "rarely" (coded 1), "sometimes" (coded 2), "often" (coded 3) and "very often" (coded 4). The answer to this question indicated whether students learned financial values such as spending habits or saving

money during childhood. Also, it specified how frequently those values were enforced. Those who had higher scores on the scale were assumed to have parents who had been more involved in teaching their children spending and saving values. Last, the reliability coefficient of the index was .856 and the level of measurement was interval.

(2) When you were in high school, did your parents/step-parents provide you information about any of the following financial tasks (a) budgeting, (b) managing credit card debt, (c) selecting auto insurance coverage, (d) applying for student loans, (e) taxes? Possible answers included "agree strongly" (coded 0), "agree somewhat" (coded 1), "disagree somewhat" (coded 2) and "disagree strongly" (coded 3). The answer to this question indicated whether students learned any financial tasks from their parents. In addition, from those students whose parents taught them financial tasks, the question pointed out which financial tasks their parents considered to be the most relevant to teach their children. Those who had lower scores on the scale were assumed to have parents who had been more involved in teaching their children about budgeting, managing credit card, selecting car insurance, applying for student loans and taxes. In addition, the reliability coefficient of the index was .758 and the level of measurement was interval.

Dependent variable. The dependent variable of this study was student's level of financial literacy. It was conceptually defined as financial knowledge that allows people to make educated financial decisions including the ability to distinguish financial choices, discuss money, financial issues and plan for the future (Valentine & Khayum, 2005; Johnson & Sherraden, 2007). A total of eight questions were used to measure students'

level of financial literacy. Each question was valued at 1 point resulting in a total of 8 possible points for all questions. Finally, the students' financial literacy score was calculated by adding all correct answers. The level of measure was ratio as it ranged from 0-8. Next, I present the questions that were asked to the students.

(1) How long does a bankruptcy remain in your credit? Possible answers include (a) "five years", (b) "ten years" and (c) "fifteen years. This question was taken from the Department of Corporations (2008). The answer to this question indicates the student's level of financial literacy about bankruptcy.

(2) Every time you check your credit history, you damage your credit. Possible answers to this statement include (a) true and (b) false. This question was taken from Bankrate (2009). The answer to this question indicates the student's level of financial literacy about credit report's facts.

3) If you have a credit card you no longer use, cut it up and throw it away. The account will close after ten months of inactivity. Possible answers to this statement include (a) true and (b) false. This question was taken from Bankrate (2009). The answer to this question indicates the student's level of financial literacy about credit cards' facts.

(4) In the case that your credit card was lost or stolen and used to charge items you didn't authorize, you are responsible for what amount? To answer this questions, the participants were asked to circle the answer they believed it was correct. Possible answers were (a) "up to $50", (b) "up to $300" and (c) "all unauthorized charges". This

question was taken from the Department of Corporations (2008). The answer to this question indicates the student's level of financial literacy in regard to credit card.

(5) Federal law gives you three days to cancel the purchase of a new or used car from a dealer. Possible answers to this statement include (a) true and (b) false. This question was taken from Cuna (2009). The answer to this question indicates the student's level of financial literacy about federal law in regards to purchases.

(6) Your take home pay from your job is less than the total amount you earn. Which of the following best describes what is taken out of your total pay? Possible answers to this question include: (a) Federal income tax, social security and Medicare contributions, (b) Federal income tax, sales tax, and social security contribution, (c) social security and Medicare contributions and (d) Federal income tax, property tax, and Medicare and social security contribution. This question was taken from Cuna (2009). The answer to this question indicates the student's level of financial literacy about taxes.

(7) Matt and Eric are young men. Each has a good credit history. They work at the same company and make approximately the same salary. Matt has borrowed $6,000 to take a foreign vacation. Eric has borrowed $6,000 to buy a car. Who is likely to pay the lowest finance charge? Possible answers to this question included: (a) Matt who is taking the vacation, (b) they will both pay the same because they have almost identical financial backgrounds, (c) Eric who bought the car and (d) they will both pay the same because the rate is set by law. This question was taken from Cuna (2009). The answer to this question indicates the student's level of financial literacy about financial charges.

(8) If you had a savings account at a bank, which of the following would be correct concerning the interest that you would earn on this account? Possible answers to this question include: (a) sales tax may be charged on the interest that you earn, (b) you cannot earn interest until you pass your 18th birthday, (c) earnings from savings account interest may not be taxed and (d) income tax may be charged on the interest if your income is high enough. This question was taken from Cuna (2009). The answer to this question indicates the student's level of financial literacy about interest rates in regards to saving accounts.

Other variables. Additional demographic variables were included in this study. These variables include respondent's sex, racial/ethnic background, age, place of residence, average hours work per week, person in charge of performing financial task in respondent's family, respondent's family structure, respondent's mother/step-mother or primary female caregiver's employment status and respondent's family income.

Several dummy variables were created in this study in order to examine group differences. Race was recoded by creating three dummy variables. The first dummy variable, beingwhite, was recoded 0 for white and 1 for non-white. The second dummy variable, beingasian, was recoded 0 for Asian and 1 for non-Asian. The last dummy variable, beinghispanic, was recoded 0 for Hispanic and 1 for non-Hispanic. In regards to African American students, this group was included in category "others", used as an omitted category, due to the small numbers of participants who reported being African American (N = 7).

Family income was recoded 0 for respondents whose family's income was less than $60.499 a year during their teen years, and 1 for those whose family's income was above $60.500 were recoded 1.

Demographic Characteristics of Respondents

Descriptive analyses were performed to examine the demographic characteristics of the sample respondents (Table 1-Table 9). The first variable, respondents' ages ranged from 18 to 45, with a mean age of 19 years old (Table 1).

Table 1

Frequency of Age

Age	Frequency	Percent
18	24	22.2
19	43	39.8
20	18	16.7
21	12	11.1
22	6	5.6
23	3	2.8
36	1	.9
45	1	.9
Total	108	100.0

Of the 108 students who participated in the study, 62% were females compared to 38% of men (Table 2).

Table 2

Frequency of Sex

Sex	Frequency	Percent
Male	41	38.0
Female	67	62.0
Total	108	100.0

There was a higher percentage of non-white respondents, including African American, Asian, Hispanic and other race (62.3%) compared to white respondents (37.7%). Overall, from a sample of 106 students (out of the 108 students who participated in this study, two students declared to state their race/ethnicity), 40 were whites while 66 respondents were non-white (Table 3).

Table 3

Frequency of Race

Race	Frequency	Percent
White	40	37.7
Black	7	6.6
Asian	25	23.6
Hispanic/ Latino	17	16.0
Other	17	16.0
Total	106	100.0

Table 4 shows that there was almost an equal split between those who lived at home (50.9%) and those who lived away from home (49.1 %).

Table 4

Frequency of Resid

Resid	Frequency	Percent
Live at home	54	50.9
Live away from home	52	49.1
Total	106	100.0

Table 5 indicates that more respondents reported to be employed (53.7%) compared to those who were unemployed (46.3%). Out of those who were employed, the majority of students (44.8%) worked between 10-20 hours per week while only 5.8% of students worked more than 35 hours per week.

Table 5

Frequency of Hswork

Hswork	Frequency	Percent
Respondent does not work	50	46.3
Works less than 10 hours per week	12	11.1
Works 10- 20 hours per week	26	24.1
Works 21 – 35 hours per week	17	15.7
Works more than 35 hours per week	3	2.8
Total	108	100.0

It was also found that most respondents lived with their biological mother and father during their teen years (71.3%) compared to other categories (28.7 %), such as lived with mother only, lived in a step-family situation or other situation (Table 6).

Table 6

Frequency of Fliast

Fliast	Frequency	Percent
Lived with biological mother and father	77	71.3
Lived with mother only	18	6.7
Lived in a step-family situation	6	5.6
Other situation	7	6.5
Total	108	100.0

According to Table 7, most respondents' mothers (67.3%) were employed full-time outside the home for pay followed by 18.7% of mothers who were employed part-time outside the home. Only a small portion of respondents' mothers were not employed outside the home for pay (7.5%).

Table 7

Frequency of Momw

Momw	Frequency	Percent
Not employed outside the home for pay	8	7.5
Employed part-time outside the home for pay	20	18.7
Employed full-time outside the home for pay	72	67.3
Other	7	6.5
Total	107	100.0

Regarding family income, the majority of the students (63.5%) claimed that their family's income during their teen years was above sixty thousand dollars a year. Remarkably, 39.2% of the students claimed that their parents' income during their teen years was above $101.000 a year (Table 8).

Table 8

Frequency of Income

Income	Frequency	Percent
Less than $ 60,499	27	36.5
More than $ 60,500	47	63.5
Total	74	100.0

In this sample, most students (41.7%) lived with both of their parents during their teen years followed by 30.6% of respondents who lived with their mother or step-mother only and 25 % who lived mostly with father or step-father (Table 9).

Table 9

Frequency of Flia

Flia	Frequency	Percent
Mostly mother/ step-mother	33	30.6
Mostly father/ step-father	27	25.0
Both parents	45	41.7
Other	3	2.8
Total	108	100.0

Frequency Tables for Independent and Dependent Variables

Tables 10-16 show the level of parents' involvement in teaching their children financial knowledge. Seven questions regarding spending and saving values, budgeting, managing credit card debt, auto insurance coverage, student loans and taxes were used to measure parental involvement. Table 10 indicates that the majority of students (37.4%) had parents or step-parents who taught them spending values "often" followed by "sometimes" and "very often" (29% and 20% respectively).

Table 10

Frequency of Spend

Spend	Frequency	Percent
Never	1	.9
Rarely	13	12.1
Sometimes	31	29.0
Often	40	37.4
Very often	22	20.6
Total	107	100.0

Similarly, most students (43.4 %) claimed that their parents or step-parents had taught them saving values “often” during their teen years (Table 11). The second and most common answer to this question was “very often” (29.2%) followed by “sometimes” (16%), “rarely” (9.4%) and “never” (1.9%).

Table 11

Frequency of Save

Save	Frequency	Percent
Never	2	1 .9
Rarely	10	9.4
Sometimes	17	16.0
Often	46	43.4
Very often	31	29.2
Total	106	100.0

In regards to other financial tasks such as budgeting, it appears that parents are playing a significant role in teaching their children budgeting skills as almost 80% of student either strongly or somewhat agreed that their parents or step-parents had provided them information about budgeting skills (Table 12). More specifically, more than half of the respondents (55.1%) somewhat agreed that their parents or step-parents had provided them with information about budgeting compared to 11.2 % of students who somewhat disagree with this statement.

Table 12

Frequency of Budget

Budget	Frequency	Percent
Agree strongly	27	25.0
Agree somewhat	59	55.1
Disagree somewhat	12	11.2
Disagree strongly	9	8.4
Total	107	100.0

Similar to budgeting, credit card debt is another subject parents appear to be taking seriously. In this sample, more than 60% of students either strongly agreed (29 %) or somewhat agreed (33.6 %) that their parents or step-parents had provided them with information about managing credit card debt during their teen years (Table 13). On the other hand, a total of 37.4 % of respondents somewhat disagreed (19.6 %) or strongly disagreed (17.8 %) that their parents had provided them information on the topic of credit card.

Table 13

Frequency of Ccdebt

Ccdebt	Frequency	Percent
Agree strongly	31	29.0
Agree somewhat	36	33.6
Disagree somewhat	21	19.6
Disagree strongly	19	17.8
Total	107	100.0

Concerning auto insurance coverage, the majority of students (59.4 %) strongly or somewhat disagreed that their parents or step-parents had provided them information about selecting auto insurance coverage (Table 14). The remaining participants (40.6 %) fell into the “strongly agree” (13.2 %) or “somewhat agree” (27.4 %) category in regards to this financial task.

Table 14

Frequency of Carinsu

Carinsu	Frequency	Percent
Agree strongly	14	13.2
Agree somewhat	29	27.4
Disagree somewhat	31	29.2
Disagree strongly	32	30.2
Total	106	100.0

The next financial task that was included in this study to measure parental involvement was providing information about applying for student loans. Similar to the previous category (selecting auto insurance coverage), applying for student loans is not a financial task parents are prioritizing. In this sample, the majority of respondents (62.2 %) identified with statements such as “disagree strongly” (35.8 %) and “disagree somewhat” (26.4 %) concluding that parents are not providing their children enough education about students loans (Table 15). On the other hand, only a small percentage of students (12.3 %) strongly agreed that their parents were providing them information about this financial task.

Table 15

Frequency of Loan

Loan	Frequency	Percent
Agree strongly	13	12.3
Agree somewhat	27	25.5
Disagree somewhat	28	26.4
Disagree strongly	38	35.8
Total	106	100.0

The last financial task that was included in the study was taxes. This financial task refers to parents teaching their children the general fundamentals of taxes. Table 16 shows that 38.3 percent of students somewhat agreed that their parents or step-parents had provided them information about taxes. In addition, 15.9 % strongly agreed with the

earlier statement. Overall, between the two previous groups, more than half of the respondents (54.2 %) either strongly agreed or somewhat agreed that they had been educated on this topic by their parents. Of the remaining students, 25.2 % chose the "strongly disagree" category while 20.6 % of respondents selected the "somewhat agreed" option.

Table 16

Frequency of Taxes

Taxes	Frequency	Percent
Agree strongly	17	15.9
Agree somewhat	41	38.3
Disagree somewhat	22	20.6
Disagree strongly	27	25.2
Total	107	100.0

Finally, Table 17 presents the results of the frequency and percentages of financial literacy which is the dependent variable in this study. According to Table 11, none of the students received the highest score of eight which would indicate that they got all the answers right. Only a very small fraction of the students (9 %) were able to answer almost all the questions right. Overall, from the 108 respondents that participated in this survey, the average score was 3.61, validating a need for improving students' financial knowledge.

Table 17

Frequency of Totalsc

Totalsc	Frequency	Percent
0	6	5.6
1	3	2.8
2	14	13.0
3	24	22.2
4	30	27.8
5	20	18.5
6	10	9.3
7	1	.9
8	0	0.0
Total	108	100.0

Chapter IV

Quantitative Findings

Factor Analysis

Table 18 shows the results of the factor analysis for the following two variables: "During your teen years, how frequently did your parents/step-parents talk to you about spending money?" (spend), and "During your teen years, how frequently did your parents/step-parents talk to you about saving money?"(save).

The eigenvalue shows that the variables constitute one factor which will be called savespend. The factor loadings present the correlation between the two variables and the factor savespend. In this case, both variables: save and spend, showed a factor loading of 0.935. The communality was 0.874 for both variables. The composite scale was created by multiplying each respondent's score on a five point scale by the corresponding factor loading and the calculating the sum: (savespend = .935 * spend + .935 * save).

The composite scale indicates whether students learned financial values such as spending habits or saving money during childhood in addition to specifying how frequently those values were discussed.

Table 18

Factor Analysis for the Composite Variable: Savespend

Variable	Eigenvalue	Factor loading	Communality
Spend	1.748	0.935	0.874
Save	.252	0.935	0.874

Table 19 presents the factor analysis for the following five variables: “When you were in high school, did your parents/step-parents provide you information about budgeting?”(budget), “When you were in high school, did your parents/step-parents provide you information about managing credit card debt?”(ccdebt), “When you were in high school, did your parents/step-parents provide you information about selecting auto insurance coverage?”(carinsu), “When you were in high school, did your parents/step-parents provide you information about applying for student loans?”(loan), and “When you were in high school, did your parents/step-parents provide you information about taxes?”(taxes).

The eigenvalue shows that the variables constitute one factor which will be called allftasks. The factor loadings present the correlation between the five variables and the factor allftasks. The highest loading 0.745 for taxes was followed by carinsu (0.732), loan (0.706), cudget (0.694), and ccdebt (0.693). The communality ranged from 0.555 for taxes followed by carinsu (0.535), loan (0.499), budget (0.482), and ccdebt (0.480). The composite scale was created by multiplying each respondent’s score on a four point

scale by the corresponding factor loading and the calculating the sum: (allftasks = .694 * budget + .693 * ccdebt + .732 * carinsu + .706 * loan + .745 * taxes).

The composite scale indicated whether students learned any financial tasks from their parents.

Table 19

Factor Analysis for the Composite Variable: Allftasks

Variable	Eigenvalue	Factor loading	Communality
Budget	2.552	0.694	0.482
Ccdebt	.904	0.693	0.480
Carinsu	.627	0.732	0.535
Loan	.520	0.706	0.499
Taxes	.397	0.745	0.555

Regression Analyses

The author conducted three separate regression analyses to examine main factors predicting financial literacy score (Table 20-22). The results of the first model which consisted of respondents' race/ethnic background (beingwhite, beingasian and beinghispanic) are shown in Table 20.

The variable race, recoded by creating three dummy variables (beingwhite, beingasian, beinghispanic), was included in the regression equation due to the overwhelming evidence which points out race/ethnicity as a predictor of level of financial literacy. Specifically, the literature review shows that white respondents have

significantly higher scores on financial literacy than non-white participants; including African Americans and Hipanics (Lucey and Giannangelo, 2006; Chen & Volpe, 1998; Murphy, 2005; Johnson & Sherraden, 2007; Eitel & Martin, 2009).

Model 1 indicates that beingwhite was the only variable that had a statistical significant relationship to the dependent variable, financial literacy score (totalsc) controlling for beingasian and beinghispanic ($\beta = -.336$, $p < .05$). In addition, the results show that whites' financial literacy score was 1.042 higher than non-whites controlling for beingasian and beinghispanic (Table 20). Of the three dummy variables in the equation, only beingwhite had a significant t value beyond the .05 level. Examining the individual beta coefficient revealed that variability in white respondents only contributed most to financial literacy variance ($\beta = -.336$, $p < .05$). See Table 20. Also, an adjusted R- square value of .058 tells us that almost 6% of the variation in respondent's financial literacy score can be explained by beingwhite, beingasian and beinghispanic.

Table 20

Regression Analysis for the Variable: Totalsc (Model 1)

Independent Variable	Unstandardized Coefficient (b)	Standard Error	Standardized Coefficient (Beta)	T
Beingwhite	-1.042	.379	-.336	-2.751*
Beingasian	-.237	.419	-.067	-.565
Beinghispanic	-.799	.465	-.195	-1.719
Constant	5.161	.790		6.538*
Adjusted R^2	.058			

* p <.05; ** p < .10

Note. Beingwhite = white respondents only; Beingasian = Asian respondents only; Beinghispanic = Hispanic respondents only.

Building on Model 1, Table 21 (Model 2) shows the effects of racial/ethnic variables and additional demographic variables including age, sex, income (family income) and hswork (respondent's employment status) on students' level of financial literacy. The variable sex was included in the regression analysis since the literature on financial literacy indicates that college-aged women are more likely to receive lower scores on financial literacy tests compared to college-aged males (Chen and Volpe, 1998; Murphy, 2005). In regards to age, previous research has established a moderately positive significant correlation between student ages and financial literacy test scores (Eitel & Martin, 2009). Furthermore, income was included to control for possible social class differences among respondents. A past study showed that students from high income families (over $80,000 per year) were more likely to score significantly higher than students from low income families (Johnson and Sherraden, 2007). The variable

Hswork (respondents' employment status) was added to the regression model since previous research has established that working between 10 and 20 hours per week increases respondents' level of financial literacy (Valentine & Khayum, 2005).

The results of Table 21 show that none of the variables in the regression equation were significantly related to respondent's financial literacy score. In other words, when controlling for race differences, sex, age, family income and employment status, there are no statistically significant differences in respondents' financial literacy scores. While no significant associations were found between any of the independent variables and the dependent variable in the model, beingwhite was close to being significant even after controlling for all other variables in the model ($\beta = -.263$, $p = .092$).

Table 21

Regression Analysis for the Variable: Totalsc (Model 2)

Independent Variable	Unstandardized Coefficient (b)	Standard Error	Standardized Coefficient (Beta)	T
Beingwhite	-0.792	0.463	-0.263	-1.710
Beingasian	0.083	0.558	0.022	0.149
Beinghispanic	-0.539	0.551	-0.140	-0.979
Sex	-0.242	0.565	-0.081	-0.663
Age	0.109	0.083	0.169	1.309
Income	-0.013	0.411	-0.004	-0.032
Hswork	-0.020	0.151	-0.017	-0.132
Constant	2.554	1.736		1.471
Adjusted R^2	0.006			

* p <.05; ** p < .10

Last, Table 22 (Model 3) also shows the effects of two independent variables (savespend and allftasks) used to measure level of parental involvement and socio-demographic variables (beingwhite, beingasian, beinghispanci, sex, age, income, and hswork). None of the two variables used to measure level of parental involvement (i.e., savespend and allftasks) included in Model 3 were significantly associated to students' financial literacy score. Although no significant associations were found between any of the independent variables and the dependent variable in the model, beingwhite was almost significant even after controlling for all other variables in the model (β = -.263, p = .100).

In comparison to Model 2 and Model 3 (Table 21-22), Model 1 was the best model in explaining the variation in the dependent variable. However, all models had small percentages of the variation in the dependent variable: 5.8% for Model 1, 0.6% for Model 2 and 0.3% for Model 3. Overall, the results from the multiple regression analysis did not support the hypothesis that parental involvement increases children' level of financial literacy.

Table 2

Regression Analysis for the Variable: Totalsc (Model 3)

Independent Variable	Unstandardized Coefficient (b)	Standard Error	Standardized Coefficient (Beta)	T
Beingwhite	-0.776	0.464	-0.268	-1.672
Beingasian	-0.253	0.563	-0.067	-0.449
Beinghispanic	-0.594	0.537	-0.163	-1.106
Sex	-0.292	0.413	-0.102	-0.706
Age	0.118	0.081	0.192	1.447
Income	0.13	0.413	0.044	0.316
Hswork	-0.025	0.154	-0.022	-0.162
Savespend	0.091	0.119	0.121	0.767
Allftasks	-0.132	0.27	-0.07	-0.489
Constant	2.551	2.044		1.248
Adjusted R^2	0.003			

* p <.05; ** p < .10

Correlation Matrix was shown in Appendix C for all independent variables included in the analyses.

Independent Samples T-test

An independent samples t-test was conducted to find out whether the frequency of parents teaching saving and spending values (savespend) was the same for males and female respondents (Table 23). The results of the independent t-test indicate that there was a significant difference in the scores for female (M = 5.525, SD = 1.536) and male (M = 4.582, SD = 1.880) respondents; (t (104) = 2.814, p = 0.006). These results suggest that sex of respondent does matter when it comes to teens learning saving and spending

value from their parents. Specifically, the findings show that during teen years, more female respondents are taught saving and spending values by their parents than males. See Table 23.

Table 23

T-Test Analysis: Savespend

	N	Mean	Std. Dev.	t-test	df	Sig.
Female	66	5.525	1.536	2.814	104	0.006**
Male	40	4.582	1.880			

*p <.05; **p <.01

Chi-Square

A chi-square test was performed to test whether there was any relationship between respondents' family income and respondent's race (Table 24). This test showed to be statistically significant. The percentage of participants whose income was above $60.999 differed by race ($X^2(1, N = 73) = 13.400, p = .000$). Specifically, white respondents appeared to have higher income than non-white participants.

Table 24

Crosstabulation of Race (Beingwhite) and Income

	Race			
Income	White	non-White	X^2	Sig.
Below 60K	3	23	13.400**	.000
Above 60K	26	21		

*p <.05; **p <.01

Chapter V

Discussion

My research did not support the findings of previous researchers in that parental involvement does not increase children's levels of financial literacy. Although the literature on consumer behavior suggests that most young people learn financial literacy from their parents (Pinto et al., 2005; Lucey & Giannangelo, 2006; Clarke et al., 2005; Palmer et al., 2001), in only one study was it concluded that individuals with higher levels of financial literacy had parents, especially mothers, who had given them financial knowledge (Clarke et al., 2005).

In this study, parental involvement did not affect children's levels of financial literacy which leads to question of whether parents are the best source for children to gain financial knowledge. In other words, even if children gain the most financial knowledge from their parents, does that mean that parents are knowledgeable enough to educate their children about money management? In fact, research shows that American adults are as financially illiterate as their children (Lusardi & Mitchell, 2007).

Bearing in mind that the respondents of Clarke's sample were disproportionately white (93%), from upper-middle class families, and from two parent homes, it is possible that children's financial literacy could be explained by variables other than parental involvement, such as parent race and/or socioeconomic background.

My study showed a statistically significant relationship between white students and level of financial literacy. Overall, white students are more likely to be financially

literate than non-whites (including Asians and Hispanics). This finding is supported by the literature, which also documented a link between racial/ethnic background and level of financial knowledge. In general, black, Asian and Hispanic students tend to score lower in financial literacy knowledge and practices than whites (Chen & Volpe, 1998; Murphy, 2005).

On the other hand, researchers have also suggested a relationship between family income and children's levels of financial literacy. Johnson and Sherraden (2007) indicated that students from high income families (over $80,000 per year) tend to score significantly higher than students from low income families. Similarly, data from the most recent wave of the National Longitudinal Survey of Youth showed that more financially literate adults (23–28 years old) had parents with stocks and retirement savings when these young adults were teenagers (Financial literacy and Ignorance, 2010).

Further analysis was performed to determine whether there was a relationship between respondent family income and respondent race. The chi-square test showed a statistically significant relationship between income and race (X^2 (1, N = 73) = 13.400, p = .000). Specifically, while 90% of white participants reported an income above $60,500, 52% of non-white participants claimed an income of less than $60,499 a year. Overall, white respondents had a higher reported income than non-white participants. It is impossible to make a definitive statement that the relationship between respondent income and financial literacy is a result of respondent higher income status. However, it is plausible that race, income, and financial literacy are related.

Part of the explanation for minorities showing low levels of financial literacy may also be related to their reluctance to engage in a financial relationship with banks because of negative historical experiences and/or perceptions. For instance, immigrants and other minorities tend to rely more on family and friends for their financing needs than on financial institutions (Rhine and Toussaint-Comeau, 2000; Lyons and Scherpf, 2005; Bloomberg Businessweek, 2010). The same can be said about minorities' unwillingness to save for retirement. In the black and Hispanic communities, strong family bonds come ahead of saving for the future (Bloomberg Businessweek, 2010). Putting aside money for retirement becomes a challenge when family members are struggling to get by (Bloomberg Businessweek, 2010). Consequently, minorities' reasons to remain outside of the financial system could explain their financial illiteracy.

Finally, additional findings suggest that sex of respondent does matter when it comes to teens learning saving and spending values learned from their parents. Specifically, the independent t-test shows that during teen years, more female respondents are taught saving and spending values by their parents than males (t (104) = 2.814, p = 0.006). This finding might explain why women in general are more knowledgeable in financial areas such as spending, saving, and personal financial planning compared to men (Chen and Volpe, 1998). On the other hand, the frequency with which parents taught budgeting, credit card debt management, auto insurance coverage, and student loan and tax information did not differ between female and male respondents. This finding is not supported by the literature, which states that parents are

more likely to talk with their sons about money than to their daughters who are socialized to be more financial dependent on their parents (Edwards et al., 2007).

Chapter VI

Conclusion

The results from the present study on financial literacy showed similar results to those found in the literature. For example, other researchers have also documented very low levels of financial literacy among college students (Valentine and Khayum, 2005; Avard et al., 2005). In fact, like the results of this study, the literature indicates that most students tend to fail financial literacy tests (Valentine and Khayum, 2005; Avard et al., 2005). In this research, only a very small fraction of the students (9%) were able to answer almost all the questions correctly. Overall, from the 108 respondents that participated in this survey, the average score was 3.61 (ranging from 0-8).

Americans' financial literacy has important implication for future financial behavior (Lusardi and Mitchell, 2006). For instance, individuals with low financial literacy are more likely to acquire debts, less likely to participate in the stock market and less likely to take advantage of funds with lower fees. Also, the lack of financial knowledge and the failure to plan ahead might result in individuals taking a mortgage without fully realizing that as the payments become unaffordable future mortgage rate resets.

The average young person today is more likely to be covered by a 401(k) plan than a traditional pension (InvestorInsight, 2010). For 401(k) plans, participants generally direct the investment of their accounts which requires some basic knowledge of economics and investment knowledge in order to allocate their contributions. On the

other hand, 73% of American young adults ages 23 to 28 do not understand basic economics and investments, so the future retirement of that group is quite unpredictable (InvestorInsight, 2010).

Americans who do not plan for retirement are prone to end up like a large number of Baby Boomers with limited assets for retirement (Exclamation Home Based Business, 2010). Consequently, individuals who have failed to plan for the future are forced to retire solely on Social Security which often does not provide enough income on which to live.

While at the individual level economic independence becomes an issue as the average Social Security check today is under $720.00 a month, the prospects of a national economic crisis are very concerning (Exclamation Home Based Business, 2010). In fact, we already know that by the year 2035 there will only be 1.9 people working for each retiree compared to the 3.4 workers that are currently working and paying into the system for each retiree who is collecting benefits (Exclamation Home Based Business, 2010).

In view of that, the goal to achieve financial literacy for all Americans should be considered a critical matter at this time. Bearing in mind that nearly all teenagers learn most about money management from their parents, establishing the most effective way to improve adults' financial knowledge offers a solid foundation to improve the financial literacy of future generations (Lucey & Giannangelo, 2006; Pinto et al., 2005). In addition, based on the literature, college students who come from states where taking a personal finance course is a required to graduate from high school make better financial decisions than students whose schools lack financial instruction (Bernard, 2010).

Therefore, training teachers to become successful financial mentors as well as requiring more states to mandate a course in personal finance can also contribute to the goal of increasing Americans' financial literacy.

Limitations of the Study

This study examined the relationship between parental involvement and students' level of financial literacy using a convenience sample of 108 undergraduate students at a local State University. However, any conclusions or recommendations based on the research findings of the present study must take into account the inherent limitations of this study.

First, this research used a small convenience sample of college students. A future research should consider using a larger and more diverse sample. Although using a random sample is expensive and time consuming, it will offer a better representation of the population. Second, this research is self-reported therefore response-bias and error in filling the questionnaire might have affected the accuracy of the findings.

In addition, perception is an important factor to keep in mind when interpreting the information received. Because the respondents' age is not far removed from adolescence, their perception and self- report could be different twenty years from now (Clarke et al., 2005).

Finally, it is possible that respondents' level of financial literacy might be affected by other variables not included in this study. In regards to the operationalization of the variable income, future research should develop a broader range of income categories to provide more detailed insight on how income might affect students' level of financial literacy.

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Appendix A

Survey Consent Form and Questionnaire

SURVEY CONSENT FORM

My name is Paula Calamato. I am a graduate student in the Sociology Program at San Jose State University conducting research on the effects that parental involvement has on children's levels of financial literacy. If you are at least 18 years old, you are eligible to participate in the survey.

The questionnaire involves answering some general demographics questions and some questions to assess students' level of financial knowledge in regards to specific financial tasks. Also, information about the role of parents in shaping students' consumer behavior will be evaluated. The survey takes about 10 minutes to complete.

Your participation in this research is voluntary. You may withdraw from the study at any time without consequences. Refusal to participate in this survey will have no effect on your grades or evaluation of your performance in class. If you decide to participate in this study, your responses will be anonymous and confidential. You may skip any question or set of questions that appear to be too personal or make you feel uncomfortable.

This research is supervised by Dr. Baba. If you have any questions about this study, you can call Dr. Baba at 408-924-5334. This research has been approved by the SJSU Human Subjects Institutional Review Board. Dr. Pamela Stacks can answer questions about your rights as a volunteer participant in this study. She can be reached at 408-924-2427.

QUESTIONNAIRE

Part One: About you and your family

Please indicate your answer by checking the boxes.

1. What is your gender?

a. □ Female b. □ Male

2. What is your racial/ ethnic background?

a.□ White/ Caucasian b.□ African American / Black c.□ Asian

d.□ Hispanic / Latino e.□ other

3. How old are you? _____

4. Residence

a. □ Live at home b. □ Live away from home

5. What was your family structure during your teen years?

a. □ Lived with their biological mother and father b. □ Lived with their mother only

c. □ Lived in a step-family situation d. □ Other situation

6. Family income during teen years

a. □ Less than $ 40 K b. □ $40- $ 60 K c. □ $61- $100 K d. □ $101-$200 K

e. □ More than $200K f. □ Don't know

7. On average, how many hours do you work per week?

a. □ I do not work b. □ Less than 10 hours per week c. □ 10-20 hours per week

d. □21-35 hours per week e. □ more than 35 hours per week

Part Two: About your parents

Please indicate your answer by circling the number to the right of each statement.

8. During your teen years, how frequently did your parents/step-parents talk to you about any of the following financial tasks?

	Never	Rarely	Sometimes	Often	Very often
a. Spending money	1	2	3	4	5
b. Saving money	1	2	3	4	5

9. When you were in high school, did your parents/step-parents provide you information about any of the following financial tasks?

	Agree Strongly	Agree Somewhat	Disagree Somewhat	Disagree Strongly
a. Budgeting	1	2	3	4
b. Managing credit card debt	1	2	3	4
c. Selecting auto insurance coverage	1	2	3	4
d. Applying for student loans	1	2	3	4
e. Taxes	1	2	3	4

Part Three: About your financial knowledge

Please indicate your answer by checking the boxes.

10. How long does a bankruptcy remain in your credit?

a.□ 5 years b.□ 10 years c.□ 15 years

11. Every time you check your credit history, you damage your credit.

a. □ True b. □ False

12. If you have a credit card you no longer use, cut it up and throw it away. The account will close after ten months of inactivity.

a. □ True b. □ False

13. In the case that your credit card was lost or stolen and used to charge items you did not authorize, you are responsible for what amount?

a.□ Up to $50 b.□ Up to $300 c.□ All unauthorized charges

14. Federal law gives you three days to cancel the purchase of a new or used car from a dealer.

a. □ True b. □ False

15. Your take home pay from your job is less than the total amount you earn. Which of the following best describes what is taken out of your total pay?

a. □ Federal income tax, social security and Medicare contributions

b. □ Federal income tax, sales tax, and social security contribution

c. □ Social security and Medicare contributions

d. □ Federal income tax, property tax, and Medicare and social security contribution

16. Matt and Eric are young men. Each has a good credit history. They work at the same company and make approximately the same salary. Matt has borrowed $6,000 to take a foreign vacation. Eric has borrowed $6,000 to buy a car. Who is likely to pay the lowest finance charge?

a. □ Matt who is taking the vacation

b. □ They will both pay the same because they have almost identical financial backgrounds

c. □ Eric who bought the car

d. □ They will both pay the same because the rate is set by law

17. If you had a savings account at a bank, which of the following would be correct concerning the interest that you would earn on this account?

a. □ Sales tax may be charged on the interest that you earn.

b. □ You cannot earn interest until you pass your 18th birthday.

c. □ Earnings from savings account interest may not be taxed.

d. □ Income tax may be charged on the interest if your income is high enough.

Thank you for your participation.

Appendix B

Institutional Review Board Approval

San José State
UNIVERSITY

Office of the Provost
Associated Vice President
Graduate Studies & Research

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To: Paula Calamato

From: Pamela Stacks, Ph.D.
Associate Vice President
Graduate Studies and Research

Date: February 20, 2009

The Human Subjects-Institutional Review Board has registered your study entitled:

"Learning financial literacy in the family"

This registration, which provides exempt status under Exemption Category 1, of SJSU Policy S08-7, is contingent upon the subjects included in your research project being appropriately protected from risk. This includes the protection of the anonymity of the subjects' identity when they participate in your research project, and with regard to all data that may be collected from the subjects. The approval includes continued monitoring of your research by the Board to assure that the subjects are being adequately and properly protected from such risks. If at any time a subject becomes injured or complains of injury, you must notify Dr. Pamela Stacks, Ph.D. immediately. Injury includes but is not limited to bodily harm, psychological trauma, and release of potentially damaging personal information. This approval for the human subject's portion of your project is in effect for one year, and data collection beyond February 20, 2010 requires an extension request.

Please also be advised that all subjects need to be fully informed and aware that their participation in your research project is voluntary, and that he or she may withdraw from the project at any time. Further, a subject's participation, refusal to participate, or withdrawal will not affect any services that the subject is receiving or will receive at the institution in which the research is being conducted.

If you have any questions, please contact me at (408) 924-2427.

Protocol # S0902053

cc. Yoko Baba, 0122

Appendix C

Correlation Matrix of Variables Used in the Analysis

APPENDIX B

Correlation Matrix of Variables Used in the Analysis

VARIABLES	SEX	RACE	FLIA	AGE	RESID
SEX	1.000	0.124	0.025	-0.027	-0.082
RACE	0.124	1.000	0.038	0.060	-0.146
FLIA	0.025	0.038	1.000	0.006	-0.070
AGE	-0.027	0.060	0.006	1.000	-0.063
RESID	-0.082	-0.146	-0.070	-0.063	1.000
FLIAST	-0.008	-0.105	-0.137	0.098	0.151
MOMW	-0.256**	-0.055	-0.032	0.055	0.044
INCOME	-0.022	-0.298**	0.136	-0.030	0.139
HSWORK	-0.218*	-0.020	-0.159	0.190*	-0.118
INFLUENC	-0.093	-0.003	-0.294**	0.294**	0.073
SPEND	-0.275**	-0.028	-0.060	-0.186	0.067
SAVE	-0.225**	-0.034	-0.074	-0.237*	0.111
BUDGET	0.113	-0.051	0.155	0.244*	-0.078
CCDEBT	0.028	-0.023	0.100	0.119	-0.038
CARINSU	0.008	0.096	0.184	0.131	0.070
LOAN	-0.062	-0.035	0.118	0.220*	-0.021
TAXES	0.018	0.092	0.031	1.000	0.033
TOTALSC	-0.112	-0.147	0.027	0.067	-0.004
SPESAV	-0.266**	-0.033	-0.074	-0.226*	0.094
ALLFTASKS	0.011	0.012	0.147	0.217*	-0.023

*p < .05, **p <.01.

continued.

APPENDIX B

Correlation Matrix of Variables Used in the Analysis (Continued)

VARIABLES	FLIAST	MOMW	INCOME	HSWORK	INFLUENC
SEX	-0.008	-0.256**	-0.022	0.218**	-0.093
RACE	-0.105	-0.055	-0.298**	-0.020	-0.003
FLIA	-0.137	-0.032	0.136	-0.159	-0.294**
AGE	0.098	0.055	-0.030	0.190*	0.294**
RESID	0.151	0.044	0.139	-0.118	0.073
FLIAST	1.000	0.184	-0.183	0.232*	0.477**
MOMW	0.184	1.000	0.009	0.080	0.075
INCOME	-0.183	0.009	1.000	-0.036	-0.176
HSWORK	0.232*	0.080	-0.036	1.000	0.107
INFLUENC	0.447**	0.075	0.176	0.107	1.000
SPEND	-0.276**	0.024	0.018	-0.084	-0.270**
SAVE	-0.308**	0.010	0.107	-0.052	-0.246*
BUDGET	0.136	-0.019	-0.058	0.031	0.510**
CCDEBT	0.118	-0.094	-0.063	0.005	0.307**
CARINSU	0.021	-0.104	-0.117	-0.126	0.188
LOAN	-0.071	0.038	-0.089	-0.037	0.110
TAXES	-0.022	-0.092	-0.214	-0.138	0.189
TOTALSC	-0.071	-0.066	0.142	0.089	-0.066
SPESAV	-0.312**	0.017	0.065	-0.074	-0.279**
ALLFTASKS	0.038	-0.072	-0.135	-0.095	0.300**

*p < .05 **p <.01.

continued.

APPENDIX B

Correlation Matrix of Variables Used in the Analysis (Continued)

VARIABLES	SPEND	SAVE	BUDGET	CCDEBT	CARINSU
SEX	-0.275**	-0.225*	0.113	0.028	0.008
RACE	-0.028	-0.034	-0.051	-0.023	0.096
FLIA	-0.060	-0.074	0.155	1.000	0.184
AGE	-0.186	-0.237*	0.244*	0.119	0.131
RESID	0.067	0.111	-0.078	-0.038	0.070
FLIAST	-0.276**	-0.308**	0.136	0.118	0.021
MOMW	0.024	0.010	-0.019	-0.094	-0.104
INCOME	0.018	0.107	-0.058	-0.063	-0.117
HSWORK	-0.084	-0.052	0.031	0.005	-0.126
INFLUENC	-0.270**	-0.246*	0.251**	0.307**	0.188
SPEND	1.000	0.748**	-0.472**	-0.209*	-0.198*
SAVE	0.748**	1.000	-0.538**	-0.319**	-0.267**
BUDGET	-0.472**	-0.538**	1.000	0.528**	0.293**
CCDEBT	-0.209*	-0.319**	0.528**	1.000	0.401**
CARINSU	-0.198*	-0.267**	0.293**	0.401**	1.000
LOAN	-0.033	-0.255**	0.354**	0.240*	0.450**
TAXES	-0.178	-0.323**	0.360**	0.345**	0.488**
TOTALSC	0.035	0.078	-0.066	-0.106	0.069
SPESAV	0.934**	0.936**	-0.541**	-0.283**	-0.248*
ALLFTASKS	-0.274**	-0.455**	0.675**	0.702**	0.735**

*p < .05 **p <.01

continued.

APPENDIX B

Correlation Matrix of Variables Used in the Analysis (Continued)

VARIABLES	LOAN	TAXES	TOTALSC	SPESAV	ALLFTASKS
SEX	-0.062	0.018	-0.122	-0.266**	0.011
RACE	-0.035	0.092	-0.147	-0.033	0.012
FLIA	0.118	0.031	0.027	-0.074	0.147
AGE	0.220*	1.000	0.067	-0.226*	0.217*
RESID	-0.021	0.033	-0.004	0.094	-0.023
FLIAST	-0.071	-0.022	-0.071	-0.312**	0.038
MOMW	0.038	-0.092	-0.066	0.017	-0.072
INCOME	-0.089	-0.214	0.142	0.065	-0.135
HSWORK	-0.037	-0.138	0.089	-0.074	-0.095
INFLUENC	0.110	0.189	-0.066	-0.279**	0.300**
SPEND	-0.033	-0.178	0.035	0.934**	-0.274**
SAVE	-0.255**	-0.323**	0.078	0.936**	-0.455**
BUDGET	0.354**	0.360**	-0.066	-0.541**	0.675**
CCDEBT	0.240*	0.345**	-0.106	-0.283**	0.702**
CARINSU	0.450**	0.488**	0.069	-0.248*	0.735**
LOAN	1.000	0.471**	0.096	-0.154	0.713**
TAXES	0.471**	1.000	-0.096	-0.268**	0.744**
TOTALSC	0.096	-0.096	1.000	0.066	-0.045
SPESAV	-0.154	-0.268**	0.066	1.000	-0.391**
ALLFTASKS	0.713**	0.744**	-0.045	-0.391**	1.000

*p < .05 **p <.01.